

**POWERZONE**

**CRUNCH<sup>®</sup>**  
**SUBWOOFERS**

**PZ12D4**

# **CRUNCH<sup>®</sup>**

## **POWERZONE SERIES CAR AUDIO SUBWOOFERS**

**Congratulations on your purchase of the new Crunch POWERZONE Series subwoofer. The PZ subwoofers have been designed to be a great addition to any car audio installation without breaking the bank.**

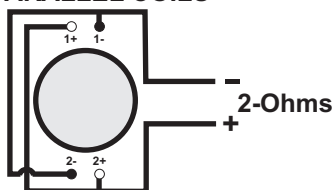
- **12" Round Subwoofers**
- **Carbon Fiber Treated Dust Cap and Rigid Polypropylene Cone**
- **UV Resistant Foam Surround**
- **R2S (Resin Reinforced Spider)**
- **Stamped Steel Basket**
- **1.5" High Temp Voice Coil**
- **DVC 4-Ohm**
- **Spade Style Speaker Terminals**
- **High Energy Vented Motor**
- **Protective Motor Cover**
- **Operates In Sealed & Ported Enclosures**

**As with all high quality car audio products, we recommend professional installation by an authorized Crunch dealer. Your dealers knowledge and experience can ensure a problem free and cosmetically integrated installation. If you choose to install the subwoofers yourself, please read the entire manual very carefully.**

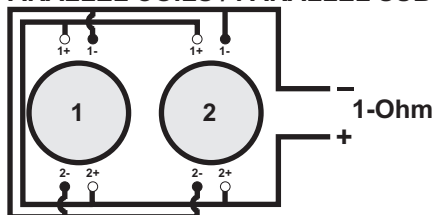
**For product videos and great tutorials, check out  
[www.youtube.com/maxxsonicsusainc](http://www.youtube.com/maxxsonicsusainc)**

## DVC 4-Ohm Coil Wiring

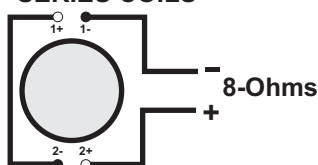
**PARALLEL COILS**



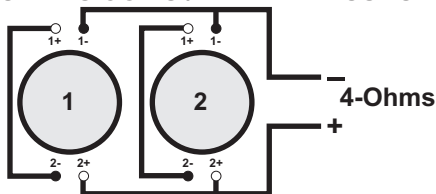
**PARALLEL COILS / PARALLEL SUBS**



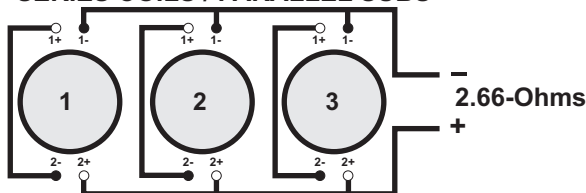
**SERIES COILS**



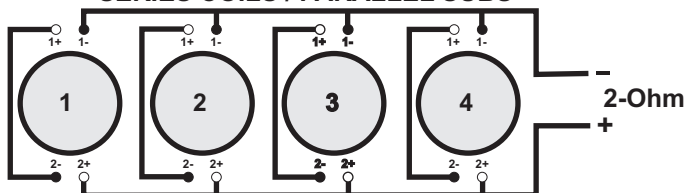
**SERIES COILS / PARALLEL SUBS**



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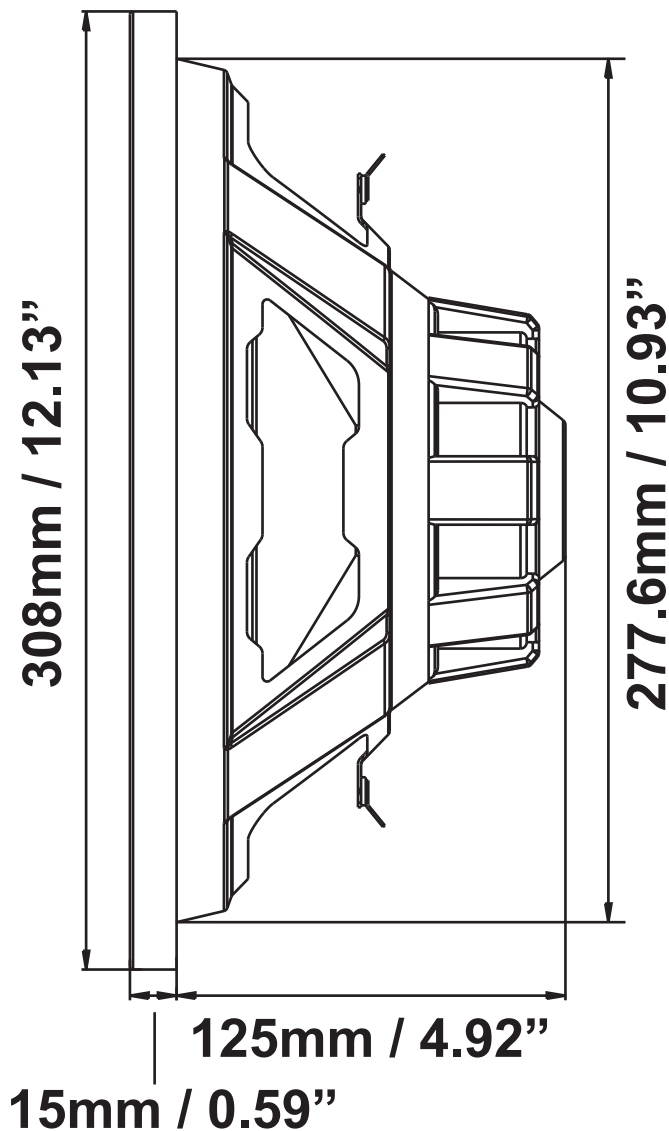


<b>POWERZONE SERIES SUBWOOFERS</b>		
<b>ELECTRICAL</b>	<b>PZ12D4</b>	
<b>WIRING</b>	Series	
NomZ	8.004	Ohm
Sd	0.0593	sqM
Revc	6.67	Ohm
BL	11.66	TxM
Vas	109.35	Liters
Cms	218.28	uM/N
Mms	101.62	Grams
Fo	33.79	Hz
Qms	6.829	
Qes	1.058	
Qts	0.916	
no	0.385	%
SPL@1W	87.37	dB
SPL@2.83W	88.79	dB
Xmax/Over Hang	5	mm
Xmech/Suspension	15	mm
RMS	300	Watts
PEAK	600	Watts
<b>CLOSED BOX DESIGNS (SEALED)</b>		
<b>Standard Tight Bass-Small Box</b>		
Box Volume	1.3	Cubic Feet
Qtc	1.718	
F3	47	Hz
<b>VENTED BOX DESIGNS (ROUND PORT)</b>		
<b>Standard Tight Bass-Small Box</b>		
Box Volume	1.5	Cubic Feet
Fb	45	Hz
Round Port Size	4	Inches
Port Length	9.6	Inches
F3	48	Hz
<b>Optimal Sound Quality-Flat Response</b>		
Box Volume	2.25	Cubic Feet
Fb	40	Hz
Slot Port Size (Inches)	12.5 x 1.5	Inches
Port Length (Inches)	16.5	Inches
F3	42	Hz
<b>FEATURES ARE SUBJECT TO CHANGE WITHOUT NOTICE</b>		
<b>NOTE: All above box volumes are internal values and already include subwoofer and port displacement.</b>		
<b>Volume listed represents the volume of an empty box using 3/4" MDF.</b>		
<b>The F3 value represents the -3db cut off of the sub/enclosure combination in Hz.</b>		

## Glossary of Terms

Q	The energy losses of relative damping (ratio of stored to dissipated energy or ratio of reactive to resistive energy).
Fs	Free air resonance of driver in Hz.
Qms	Mechanical Q.
Vas	Volume of air equivalent to driver from the rest position.
Cms	Mechanical compliance of a loud speaker piston.
Mms	Moving mass of total loud speaker piston assembly.
Xmax	The maximum linear excursion of a loud speaker.
Sd	Surface area of the cone.
Dia	The piston diameter of a loud speaker.
Qes	Electrical Q of a system.
Re	DC resistance.
Le	VC inductance.
Pe	Maximum input power.
Qts	Total Q of the system.
Sens	Sensitivity. An efficiency measurement in dB's.
Vc	Volume of a closed or sealed enclosure
Vb	Volume of a vented enclosure.
Fc	The resonant frequency of a closed or sealed system
Fb	The resonant frequency of a vented system
F3	The half-power (-3dB) frequency of a loud speaker enclosure
Qtc	The Q of a loud speaker at Fc in a closed box, considering both it's electrical and mechanical resistance.
QL	The Q of a vented box, resulting from all box losses.
DV	Diameter of vent.
LV	Length of vent.
H	Height.
W	Width.
D	Depth

# Subwoofer Dimensions



## **Maxxsonics Limited Warranty**

As the manufacturer of Maxxsonics, MB Quart, Autotek, Crunch, Hifonics and MAXXLINK car audio products, Maxxsonics USA Inc. Warrants to the original consumer purchaser the product to be free from defects in material and workmanship for one (1) Year from date of purchase.

All other parts and accessories of the system are warrantied to be free from defects in material and workmanship for one (1) year from date of purchase. Maxxsonics will repair or replace at it's option and free of charge during the warranty period, any system component that proves defective in materials and workmanship under normal installation, use and service provided that the product is returned to the authorized Maxxsonics dealer from where it was purchased. A photo copy of the original receipt must accompany the product being returned.

Valid purchase receipts will contain the name and address of the authorized reseller.

Any damage to the product as a result of misuse, abuse, accident, incorrect wiring, improper installation, alteration of date code or bar code labels, revolution, natural disaster, or any sneaky stuff because someone messed up, repair or alteration out side of our factory or authorized service centers and any thing else you have done that you should not have done is not covered.

This warranty is limited to defective parts and specifically excludes any incidental or consequential damages connected therewith. This warranty is not to be construed as an insurance policy.

Warranty on installation labor, removal, re-installation and freight charges are not the responsibility of Maxxsonics USA Inc.

Warranty products damaged as a result of insufficient or improper packing materials are not covered by this limited warranty and such damaged product will be returned "as is" at the expense of the owner.



**MAXXSONICS**  
Designed and Engineered in the USA  
[www.maxxsonics.com](http://www.maxxsonics.com)



**MAXXSONICS®**

**MBQUARTI®**

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